Atty. Dkt. No. 017835-0362

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Robert SCHULZ et al.

Title: *NANOCOMPOSITES WITH ACTIVATED INTERFACES PREPARED BY MECHANICAL GRINDING OF MAGNESIUM HYDRIDES AND USE FOR HYDROGEN STORAGE*

Appl. No.: 09/529,910

Filing Date: June 28, 2000

Examiner: S. Ip

Art Unit: 1742

AMENDMENT AND REPLY UNDER 37 CFR 1.111

Mail Stop NON-FEE AMENDMENT
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

This communication is responsive to the Non-Final Office Action dated August 13, 2003, concerning the above-referenced patent application.

Amendments to the Specification begin on page 2 of this document.

Amendments to the Claims are reflected in the listing of claims which begins on page 4 of this document.

Remarks/Arguments begin on page 7 of this document.

Please amend the application as follows:

Amendments to the Specification:

Please amend the specification as follows:

Please replace paragraph starting at page 2, lines 3-6, with the following rewritten paragraph:

--Fig. 4 is a curve giving the hydrogen absorption rate as a function of the time during a first absorption and desorption cycle carried out to 350°C under a pressure of 150 psi on the nanocomposite whose x-ray diffraction curve is shown in Fig. 3;

Fig. 5 is a curve giving the hydrogen absorption rate as a function of the time during a second absorption and desorption cycle carried out at 350°C under a pressure of 150 psi on the nanocomposite whose x-ray diffraction curve is shown in Fig. 3.—

Please replace paragraph starting at page 2, lines 29-34, with the following rewritten paragraph:

--Fig. 10 is a curve giving the hydrogen absorption rate as a function of the time during a first absorption cycle carried out at various temperatures under a same pressure of 150 psi with a powder of a nanocomposite according to the invention prepared by intensive mechanical grinding for 20 hours followed by a desorption of a mixture containing a commercial polycrystalline MgH_2 powder and 5% of a powder of V;

Fig. 11 is a curve giving the hydrogen absorption rate as a function of the time during a second absorption cycle carried out at various temperatures under a same pressure of 150 psi with a powder of a nanocomposite according to the invention prepared by intensive mechanical grinding for 20 hours followed by a desorption of a mixture containing a commercial polycrystalline MgH_2 powder and 5% of a powder of V.—

Please replace paragraph starting at page 3, lines 23-28, with the following rewritten paragraph:

--Fig. 17 is a curve giving the hydrogen absorption and desorption rate as a function of the time during a first absorption and desorption cycle carried out at 300°C under a pressure of 150 psi, on a powder of a nanocomposite according to the invention prepared by intensive mechanical grinding for 20 hours followed by desorption of a mixture containing a commercial polycrystalline MgH_2 powder and 5% at of a powder of Nb;

Fig. 18 is a curve giving the hydrogen absorption and desorption rate as function of the time during a first absorption cycle carried out at 100°C under a pressure of 150 psi on a powder of a nanocomposite mechanical grinding for 20 hours followed by a desorption of a mixture containing a commercial polycrystalline MgH_2 powder and 5% at. Of a powder of Nb.—

Please replace paragraph starting at page 5, lines 13-14, with the following rewritten paragraph:

--Fig. 28 is a curve identical to the one shown in Fig. 27, except that the absorption temperature was 373°K;

Fig. 29 is a curve identical to the one shown in Fig. 27, except that the absorption temperature was 423°K;--.